

Adapting Flood and Urban Drainage Systems to a Changing Climate

October 26th -27th, 2010

EPA's Edison Environmental Center, Edison, NJ

Two-Day Workshop

Organized by: U.S. Environmental Protection Agency (EPA)
Pennine Water Group (PWG)
Flood Resilience Group (FRG)

Background

Many studies in Europe and the USA have considered the potential drivers, impacts and responses to cope with the future pressures on urban water and flood risk management systems. In the USA, Low Impact Development (LID) and Green Infrastructural (GI) measures are being implemented recognizing the multi-value of these approaches. Other studies have highlighted water systems and the need to change the culture as to how these are to be better managed in the future. In Europe, leading studies into future flood risks under climate and other changes has led to a large number of research and development programs to better understand the potential future problems and how to respond to these at a time when economic stresses require non-traditional approaches. It is intended to bring together a number of leading specialists from Europe and the USA to review where thinking and ideas are in these areas and consider how the leading work from each continent can be better utilized to develop new and innovative approaches to better adapt flood and urban drainage systems to a changing climate. The participants from Europe are working on three relevant projects: MARE (Managed adaptation and responses to changing flood risk management); FloodResilientCity and PREPARED (adapting water supply and sanitation to changing climate), partnering both Seattle Public Utilities and Monash University, Australia amongst others.

Although focused mainly on ideas for the adaptation of urban drainage systems to climate change; the interactive effects with rivers, streams and coastal systems are also recognized as vitally important. The emphasis will be on flexible and adaptable non-structural measures, at lower cost, rather than large dykes and embankments: e.g., regulations and planning processes, behaviours, expectation management, targets, and performance standards. Analytical processes and techniques will also be considered. The Dutch model of capacities, threshold, coping, recovery and adaptation will be used as a framework for the workshop.

Themes	Climate change pressures
	Adapting urban drainage and city planning - LIDS and GI
	Synergies with resilience in river, stream and coastal flood risk management
	Co-learning from European and US practices

Objectives

The objectives of this workshop are to

- Exchange EU, Australian and US experience in relation to the adaptation of urban water and flood risk management systems in relation to climate and other changes
- Review the use of structural and non-structural measures (including LID and GI approaches) within the context of diverse organizational and regulatory regimes across the participants' areas of work
- Define how future collaboration between USA, Europe and Australia may be further promoted and what potential areas of mutual benefit should be further explored

Outputs

A summary report will be produced on the state of the art in this area, together with a definition of the areas where new R&D is required. Part of the outcome would be a journal-targeted summary paper from the workshop. It is expected that needed changes in practice will also be identified.

Participants

EPA, US Army Corps of Engineers (USACE), Pennine Water Group (PWG), Flood Resilience Group (FRG), major municipalities, and other research leaders in the U.S.

Agenda

Tuesday, October 26, 2010

9 : 0 0 a m	Assemble/Logistics	
09:00 am - 09:10 am	Objective of the 2 days Process and expected outcomes Richard Ashley & Jim Goodrich	
	The Context - Chaired by Susan Durden	
09:10 am - 09:30 am	The Challenge: Climate Change and Adaptation Needs in the Light of Economic Stress Richard Ashley	
09:30 am - 09:50 am	EPA/ORD National Water Research Climate Change Program	Jim Goodrich
09:50 am - 10:10 am	Flood Resilience: Where are We?	Chris Zevenbergen
10:10 am - 10:30 am	LIDs and GI : Making the Urban Area More Resilient	Scott Struck
10:30am - 11.00am	Break	
11:00 pm - 11:20 pm	The PREPARED Project	Simon Tait
11:20 pm - 11:40 pm	USACE Flood Risk Management and Coastal R&D	Bill Curtis
11:40 pm - 12:00pm	The MARE and FloodResilienCity Projects	John Blanksby
	Lunch break	
1:00 pm -2:00 pm	Workshop: What are the Challenges? - Chaired by Chris Zevenbergen	
	Responding - Chaired by Simon Tait	
2:00pm - 2:20pm	Water and Green Help Deal with the Heat Island	Nigel Tapper?
2:20pm -2:40pm	The Multi-functional Value of GI	Steve Wise
2:40pm -3:10pm	Break	
3:10pm - 3:30pm	Tools and Information to Support Understanding and Management of Stormwater in a Changing Climate	Thomas Johnson, EPA/ORD/NCEA
3:30pm - 4:00pm	Workshop: Responding to the Challenges - Chaired by Jim Goodrich	
4 : 0 0 p m	Workshop Summation - Jim Goodrich	

Wednesday, October 27, 2010

9 : 0 0 a m	Restart - What did we Discover Yesterday?	
9:00 am - 09:20 am	Modelling and Mapping - Contribution to Managing Floods and Heat	William Veerbeek
09:20 am - 09:40 am	Accounting for Flexibility in Adapting	Berry Gersonius
09:40 am - 10:00 am	Capacities for Adapting to a Changing Climate - Seattle's Endeavours	Tracy Tackett
10:00 am - 10:20 am	Managing River and Coastal Flooding with the Aid of Foresighting	Jonathan Simm
10:20 am - 11:00am	Break	
11:00 am - 11:20 am	City scenarios and the flexible and adaptable water sensitive city	Wolfgang Rauch?
11:20 am - 12:00 am	Summary - opportunities to respond differently - open discussion	Richard Ashley
12:00am - 1:00pm	Lunch Break	
1:00pm - 3:00pm	Workshop Discussion Groups: What do we need to know to respond differently?	
3:00pm - 3:30pm	Rapporteurs Feedback	
3:30pm - 4:30pm	Formulation of summary messages, outcomes and way forward - chaired by Scott Struck	
4 : 3 0 p m	CLOSE	

Registration

To register, please inform Richard Field by email at: field.richard@epa.gov. Registration is open through October 13, 2010 and is free-of-charge.

The workshop will be held at EPA's Edison Environmental Center
2890 Woodbridge Avenue
Edison, NJ, USA

Website Directions: http://www.epa.gov/nrmrl/directions_Edison.html

